

(9) D1/27-C-14

549





Digitized by the Internet Archive
in 2015

<https://archive.org/details/b24989782>

Matthew Baillie M. D.
with respectful Compliments
from the Author

A
SYSTEMATIC ARRANGEMENT
OF
MINERALS,

FOUNDED ON THE
JOINT CONSIDERATION
OF THEIR
CHEMICAL, PHYSICAL, AND EXTERNAL
CHARACTERS;
REDUCED TO THE FORM OF TABLES,
AND EXHIBITING
THE ANALYSIS OF SUCH SPECIES AS HAVE HITHERTO BEEN MADE
THE SUBJECT OF EXPERIMENT.

BY *WILLIAM BABINGTON*,
LECTURER IN CHEMISTRY AT GUY'S HOSPITAL.

LONDON:
PRINTED FOR THE AUTHOR BY T. BENSLEY.
SOLD BY G. G. AND J. ROBINSONS, PATERNOSTER-ROW; AND
T. COX, ST. THOMAS'S-STREET, BOROUGH.

1795.

ROYAL COLLEGE
OF
PHYSICIANS
OF
LONDON

(9)

ROYAL COLLEGE OF PHYSICIAN LIBRARY	
CLASS	549
ACCN.	12675
SOURCE	
DATE	

ADVERTISEMENT.

THE contents of the following pages were not originally intended to be made public. They were compiled merely for the Author's own use, while employed in arranging a Cabinet selected from the very extensive Collection of Minerals which he had an opportunity of purchasing a few years ago. But as that arrangement occupied a length of time, and a degree of attention, much beyond what was at first conceived to be sufficient for such an undertaking, the Author, though he would by no means be understood as holding forth this performance as a pattern to others, yet thinks, that in publishing it, he may not only considerably abridge the labour of those who shall hereafter engage in a similar task, but also render an acceptable service to many who wish to acquire a comprehensive knowledge of Mineralogy, but who have neither leisure nor inclination to turn over the numerous works on the subject, in which the necessary information lies scattered. Besides, as no endeavour has been spared to render the Collection from which this Synopsis was drawn up, one of the most perfect in a scientific point of view, the annexed Catalogue will afford, to such as have advanced a considerable way in the business of collecting, an opportunity of determining the comparative value of what they already possess, as well as what articles may yet be wanting to make their cabinets more complete.

The general plan differs but little from that followed by Baron Born in his arrangement of the Collection of M^{lle} Raab, the CLASSES, ORDERS, GENERA, and SPECIES, being founded on chemical distinctions, and the VARIETIES on external character. On the subject of Crystallization particular pains have been taken to associate the external figure of substances with their internal structure, so as to reduce them into more connected series than has hitherto been done in any attempt of the kind. Agree-

ably, also, to the example of M. Karsten, in his Tab. Uberf. or Synoptical Tables, the Analyses, as far as they have been ascertained, are subjoined throughout; the whole, therefore, meant to exhibit a comprehensive view of Mineralogical Arrangement, according to the latest and best writers on the subject.

However simple this performance may appear to some, yet such as are better acquainted with the nature of the subject must know, that to execute it, even with tolerable correctness, requires much labour in collecting, and some judgment in arranging the materials. The Author presumes not to say to what degree of merit it is intitled in either of these respects, but wishes it to be understood, that whatever it may be, he claims it not wholly to himself; for, on this occasion, as well as on many others of more importance, he has received much assistance from his friend Dr. MITCHELL, to whom he takes this opportunity of returning his most grateful acknowledgments.

SYSTEMATIC ARRANGEMENT OF MINERALS.

CLASS I. S A L T S.

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
1. Simple.	1. Acid.	1. Carbonic. - -	- - - - -	Carbon 17. Oxygen 83. <i>Chaptal.</i>
		2. Boracic.	1. In solution - -	- - - - - <i>Hæser.</i>
		3. Sulphuric.	1. Concrete. 2. Liquid. 3. Gaseous.	Sulphur 72. Oxygen 28. <i>Berthollet.</i>
2. Compound.	1. Base, Potash.	1. Carbonate of Potash.	1. In solution.	Acid 23. Alkali 70. Water 5. <i>Bergman.</i>
		2. Muriate of Potash.	1. In solution.	Acid 31. Alkali 61. Water 8. <i>Berg.</i>
		3. Nitrate of Potash.	1. In solution.	Acid 33. Alkali 49. Water 18. <i>Berg.</i>
		4. Sulphate of Potash.	1. In solution.	Acid 40. Alkali 52. Water 8. <i>Berg.</i>
	2. Base, Soda.	1. Carbonate of Soda.	1. In efflorescence. 2. In solution.	Acid 16. Alkali 20. Water 64. <i>Berg.</i>
		2. Borate of Soda.	1. Crystallised. a. In truncated hex- hedral prisms. 2. In solution.	Acid 34. Alkali 17. Water 47. <i>Delamethic.</i>
		3. Muriate of Soda.	1. Crystallised. a. In cubes. 2. Amorphous. a. Fibrous. b. Compact.	Acid 52. Alkali 42. Water 6. <i>Berg.</i>
		4. Sulphate of Soda.	1. In solution.	Acid 27. Alkali 15. Water 59. <i>Berg.</i>
	3. Base, Ammoniac.	1. Carbonate of Ammoniac.	1. In solution.	Acid 45. Alkali 43. Water 12. <i>Berg.</i>
		2. Muriate of Ammoniac.	1. Concrete.	Acid 52. Alkali 40. Water 8. <i>Delameth.</i>
		3. Nitrate of Ammoniac.	1. Mixed with Nitrate of Potash.	Acid 46. Alkali 40. Water 14. <i>Delameth.</i>
		4. Sulphate of Ammoniac.	1. Concrete.	Acid 42. Alkali 40. Water 18. <i>Delameth.</i>

CLASS II.
E A R T H S.

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
1. Homogeneous.	1. Lime.	1. Pure lime.	1. Amorphous. a. Earthy. b. Loofe.	<i>Falconer.</i> <i>Monnet.</i>
		2. Carbonate of Lime.	1. Crystallised. a. In compressed rhomboidal parallelepipeds. b. In lengthened rhomboidal parallelepipeds. c. In hexedral prisms, terminated by trihedral pyramids with rhombic faces. d. The same, terminated by obtuse trihedral pyramids with pentagonal faces. e. The same, having the solid angle of the pyramid more or less deeply truncated. f. The same, completely truncated. g. In acute hexedral pyramids, joined alternately base to base, with or without an intermediate prism. h. Lenticular. i. Indeterminate.	Acid 34. Lime 55. Water 11. <i>Berg.</i>
		<i>Arragon Spar.</i>	2. Of particular shapes. a. Conical. b. Cylindrical. c. Tubular. d. Ramose, &c. e. Coralliform. f. Oviform.	
		<i>Stalactites</i> - { <i>Flos Ferri.</i> <i>Pisolithus.</i>	3. Amorphous. a. Foliated. b. Granular. c. Fibrous. d. Arenaceous. e. Slaty. f. Compact. g. Friable. h. Loofe.	Acid 47. Lime 53. <i>Kirwan.</i>
		<i>Marble.</i> <i>Limestone.</i> <i>Chalk.</i> <i>Tufa.</i> <i>Ganil.</i>		Acid 42. Lime 53. Argill 2. Water 3. <i>Kirw.</i>
		3. Swine-Stone,	1. Amorphous. a. Foliated. b. Granular. c. Compact.	Carbonate of Lime impregnated by Petroleum. <i>Kirw.</i>
		4. Sidero-calcite. <i>Pearl Spar.</i>	1. Crystallised. a. In compressed rhomboidal parallelepipeds. 2. Amorphous. a. Foliated.	Carbonate of Lime 60. Oxyde of Manganese 35. Iron 5. <i>Woulfe.</i>
		5. Baryto-calcite.	1. Crystallised. a. In tetrahedral prisms. 2. Amorphous. a. Striated.	Carbonate of Lime 92. Carbonate of Baryte 8. <i>Berg.</i>

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
1. Homogeneous.	1. Lime.	6. Muri-calcite. <i>Compound Spar.</i>	1. Crystallised. <i>a. In rhomboids.</i> 2. Amorphous. <i>a. Indurated.</i> <i>b. Loofe.</i>	Carbonate of Lime 52. Carbonate of Magnesia 45. Iron and Manganese 3. <i>Klaproth.</i>
		7. Argentine. <i>Schiefer Spar.</i>	1. Amorphous. <i>a. Curved foliated.</i>	Carbonate of Lime, with Magnesia, Argill, and Iron? <i>Kirw.</i>
		8. Superfaturated with Carbonic Acid. <i>Dolomite.</i> <i>Elastic Marble.</i>	1. Amorphous. <i>a. Granular.</i> <i>b. Compact.</i>	Lime 44,29. Acid 46,1. Argill 5,86. Magnesia 1,4. Iron 0,074. <i>Saunders, Jr.</i>
		9. Floate of Lime. <i>Fluor.</i>	1. Crystallised. <i>a. In cubes, entire, or variously truncated or bevelled.</i> <i>b. In aluminiform octohedrons.</i> <i>c. In tetrahedral prisms, terminated by tetrahedral pyramids.</i> 2. Amorphous. <i>a. Foliated.</i> <i>b. Granular.</i> <i>c. Compact.</i> <i>d. Earthy.</i>	Acid 16. Lime 57. Water 27. <i>Scheele.</i> Acid 28,5. Lime 21. Water 1. Silica 31. Argill 15,5. Iron 1. Muriatic Acid 1. Phosphoric Acid 1. <i>Pelletier.</i>
		10. Phosphate of Lime. <i>Apatite.</i>	1. Crystallised. <i>a. In hexahedral prisms, entire or truncated.</i> 2. Amorphous. <i>a. Striated.</i>	Acid 45. Lime 55. <i>Klapr.</i> Acid 34. Lime 59. Silica 2. Fluoric Acid 2,5. Muriatic Acid 0,5. Carbonic Acid 1. Iron 1. <i>Pellet.</i>
		11. Sulphate of Lime. <i>Gypsum.</i>	1. Crystallised. <i>a. In rhomboidal decahedrons and their varieties.</i> <i>b. Lenticular.</i> <i>c. Indeterminate.</i> 2. In particular shapes. <i>a. Ramose.</i> 3. Amorphous. <i>a. Foliated.</i> <i>b. Granular.</i> <i>c. Fibrous.</i> <i>d. Striated.</i> <i>e. Compact.</i> <i>f. Farinaceous.</i>	Acid 46. Lime 32. Water 22. <i>Berg.</i>
	2. Strontian.	1. Carbonate of Strontian. <i>Strontianite.</i>	1. Amorphous. <i>a. Striated.</i>	Acid 26,5. Strontian 73,5. <i>Kirw.</i>
	3. Baryte.	1. Carbonate of Baryte; <i>Barolite.</i>	1. Crystallised. <i>a. In hexahedral pyramids joined base to base.</i>	Acid 20,8. Baryte 78,6. <i>Withering.</i>

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
1. Homogeneous.	3. Baryte.	1. Carbonate of Baryte.	<i>b.</i> In hexhedral prisms terminated by corresponding pyramids.	Acid 32,8. Baryte 67,2. <i>Wither.</i>
			2. Amorphous. <i>a.</i> Striated. <i>b.</i> Foliated.	
		2. Sulphate of Baryte. <i>Baroselenite.</i> <i>Acicular.</i>	1. Crystallised. <i>a.</i> In lengthened octohedrons, with cuneiform summits entire or truncated. <i>b.</i> In prismatic needles. <i>c.</i> Lenticular. <i>d.</i> Indeterminate.	
			2. Of particular shapes. <i>a.</i> Stalactitic. <i>b.</i> Tubuliform, &c.	
			3. Amorphous. <i>a.</i> Foliated. <i>b.</i> Striated. <i>c.</i> Compact. <i>d.</i> Earthy.	
		<i>Bolognian Stone.</i>		
	4. Magnesia.	3. Liver Stone.	1. Amorphous. <i>a.</i> Foliated. <i>b.</i> Striated.	Sulphate of Baryte 62. Silix 16. Argill 15. Sulphate of Lime 6. Water 2. <i>Arvidson.</i> Sulphate of Baryte 38. Silix 33. Sulphate of Argill 22. Sulphate of Lime 7. Petroleum 5. <i>Berg.</i> Magnesia, Lime, and some Iron. <i>Kirw.</i> Magnesia 13. Silix 50. Argill 10. Lime 3. Oxyde of Iron 0,9. Water 12. <i>Fabroni.</i> Silix 50, with Carbonate of Magnesia and Iron. <i>Kirw.</i> Magnesia 50. Silix 50. <i>Weigleb.</i> Magnesia 44. Silix 50. Argill 6. <i>Hæpfner.</i> Magnesia 38. Silix 38. Argill 7. Iron 5. Carbonate of Lime 1. and a trace of Fluoric Acid. <i>Weigl.</i>
		1. Calci-murite.	1. Amorphous. <i>a.</i> Earthy.	
		2. Argillo-murite.	1. Amorphous. <i>a.</i> Earthy. <i>b.</i> Loofe.	
		3. Silici-murite. <i>Martial Mureatic Spar.</i> <i>Meerschaum.</i>	1. Amorphous. <i>a.</i> Foliated. <i>b.</i> Earthy.	
		4. Talc. <i>Venetian Talc.</i> <i>Schistose Talc.</i> <i>Talcite.</i>	1. Amorphous. <i>a.</i> Foliated. <i>b.</i> Slaty. <i>c.</i> In small scales.	
		5. Lapis Ollaris. <i>Pot Stone.</i>	1. Amorphous. <i>a.</i> Undulatingly foliated. <i>b.</i> Slaty.	
		6. Steatites.	1. Crystallised. <i>a.</i> In cubes, truncated at the angles. <i>b.</i> In hexhedral prisms. <i>c.</i> In octohedral prisms, truncated.	

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
1. Homogeneous.	4. Magnesia.		2. Amorphous. a. Foliated. b. Striated. c. Earthy.	Magnesia 20,84. Silex 48,42. Argill 14. Iron 1. Air and Water 16. <i>Klapr.</i>
		7. Serpentine.	1. Amorphous. a. Compact.	Magnesia 33. Silex 45. Mag- netic Iron 14. Carbonate of Lime 6,25. Argill 0,25. with a little Muriate of Magnesia and Water. <i>Knock.</i>
		8. Chlorite.	1. Crystallised. a. In tetrahedral prisms. 2. Amorphous. a. Slaty. b. Earthy. c. In loose scales.	Magnesia 0,3947. Silex 0,415. Argill 0,0613. Lime 0,015. Iron 0,1015. Air and Wa- ter 0,015. <i>Hapfn.</i>
		9. Asbestos. <i>Ligniform Asbestos.</i>	1. Amorphous. a. Striated. b. Fibrous. c. Slaty.	Carbonate of Magnesia 16. Sillex 63,9. Carbonate of Lime 12,8. Argill 1,1. Oxyde of Iron 6. <i>Berg.</i>
		10. Amianthus.	1. Crystallised. a. In compressed rhomboidal parallelepipeds. 2. Amorphous. a. In flexible fibres. b. Farinaceous.	Carbonate of Magnesia 18,6. Sillex 64. Carbon. of Lime 6,9. Barofelenite 6. Argill 3,3. Oxyde of Iron 1,2. <i>Berg.</i>
		11. Suber Mon- tanum.	1. Amorphous. a. Cork-like. b. Spongy. c. Membranaceous.	Carbonate of Magnesia 22. Si- lex 62. Argill 2,8. Carbon. of Lime 10. and Oxyde of Iron 3,2. <i>Berg.</i>
		12. Actynolite. <i>Glassy Actynolite.</i> <i>Schorlaceous Actynolite.</i> <i>Lamellar Actynolite.</i>	1. Crystallised. a. In compressed hexedral prisms, with smooth sur- faces. b. In polyhedral prismatic crystals, with grooved sur- faces. 2. Amorphous. a. Lamellated. b. Foliated. c. Striated. d. Fibrous.	Carbonate of Magnesia 20. Sillex 64. Carbon. of Lime 9,3. Argill 2,7. Oxyde of Iron 4. <i>Berg.</i> Magnesia 22. Sillex 43. Iron 34. <i>Weigl.</i>
		13. Jade.	1. Amorphous. a. Compact.	Carbonate of Magnesia 38. Sillex 47. Carbon. of Lime 2. Argill 4. Oxyde of Iron 9. <i>Hapfn.</i>
		14. Baikalite.	1. Crystallised. a. In tetrahedral prisms, en- tire or truncated, with ob- lique pyramids. b. In hexedral prisms.	Magnesia 30. Sillex 44. Lime 20. Oxyde of Iron 6. <i>Lowitz.</i>

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
1. Homogeneous.	4. Magnesia.	15. Boracite.	1. Crystallised. <i>a.</i> In cubes, entire, or differently truncated.	Boracic Acid 68. Magnesia 13. Lime 11. Silica 1. Argill 1. Iron 1. <i>Westrumb.</i>
	5. Argill.	1. Carbonate of Argill. <i>Lac Lunæ.</i>	1. Of particular shapes. <i>a.</i> Reniform.	Carbonic Acid, Argill, and some Lime. <i>Schreiber.</i>
		2. Clay. <i>Porcelain Clay.</i> <i>Potters Clay.</i> <i>Shale and Bituminous Shale.</i>	1. Amorphous. <i>a.</i> Soft and meagre. <i>b.</i> Soft and unctuous. <i>c.</i> Indurated. <i>d.</i> Slaty.	Carbonate of Argill and Silica. Argill 60. Silica 20. <i>Wedgwood.</i>
		3. Lithomarga.	1. Amorphous. <i>a.</i> Friable. <i>b.</i> Indurated.	Argill 11. Silica 60. Carbon. of Lime 5,7. Carbon. of Magnesia 0,5. Oxyde of Iron 4,7. Air and Water 18. <i>Berg.</i>
		4. Fullers Earth.	1. Amorphous. <i>a.</i> Earthy.	Argill 0,25. Silica 0,51. Carbon. of Lime 0,03. Carbon. of Magnesia 0,007. Oxyde of Iron 0,03. Moisture and Air 0,15. <i>Berg.</i>
		5. Bole.	1. Amorphous. <i>a.</i> Earthy.	Argill 19. Silica 47. Carbon. of Lime 5,4. Carbonate of Magnesia 6. Oxyde of Iron 5,4. Water and Air 17. <i>Berg.</i>
		6. Tripoli.	1. Amorphous. <i>a.</i> Earthy.	Argill 7. Silica 90. Iron 3. <i>Haaffé.</i>
		7. Lepidolite.	1. Amorphous. <i>a.</i> Foliated.	Argill 38,25. Silica 54,5. Oxyde of Iron and Manganese 0,075. Water and Air 2,5. <i>Klapr.</i>
		8. Sappare. <i>Cyanite.</i>	1. Crystallised. <i>a.</i> In compressed tetrahedral prisms. <i>b.</i> Indeterminate.	Argill 67. Silica 13. Magnesia 13. Iron 5. Lime 2. <i>Saunders, Jr.</i>
		9. Mica.	1. Crystallised. <i>a.</i> In hexagonal plates. <i>b.</i> Indeterminate. 2. Amorphous. <i>a.</i> Foliated.	Argill 28. Silica 38. Magnesia 20. Oxyde of Iron 20. <i>Kirw.</i>
		10. Micarelle.	1. Amorphous. <i>a.</i> Interpersed in granite.	Argill 63. Silica 29. Oxyde of Iron 7. <i>Klapr.</i>

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
1. Homogeneous.	5. Argill.	11. Hornblende. <i>Basaltic Hornblende.</i>	1. Crystallised. <i>a.</i> In hexhedral prisms, with trihedral pyramids having rhombic faces. <i>b.</i> In tetrahedral prisms, with dihedral summits. <i>c.</i> In compressed hexhedral prisms, with oblique dihedral summits. <i>d.</i> In rhomboidal decahedrons.	Argill 27. Silex 58. Lime 4. Magnesia 1. Iron 9. <i>Berg.</i>
		<i>Common Hornblende. Schistose Hornblende.</i>	2. Amorphous. <i>a.</i> Foliated. <i>b.</i> Striated. <i>c.</i> Slaty.	Argill 22. Silex 37. Magnesia 16. Lime 2. Iron 23. <i>Kirw.</i>
		12. Resplendent Hornblende. <i>Labradore Hornblende. Schiller Spar.</i>	1. Amorphous. <i>a.</i> Foliated. <i>aa.</i> Dark-coloured. <i>bb.</i> Light-coloured.	Argill 17. Silex 43. Magnesia 11. Iron 23. <i>Gmelin.</i>
		13. Basalt.	1. Of particular shapes. <i>a.</i> In 3, 4, 5, 6, 7, 8, or 9-sided columns, entire or articulated. <i>b.</i> Tabular. <i>c.</i> Lenticular.	Argill 15. Silex 50. Carbon. of Lime 8. Iron 25. Magnesia 2. <i>Berg.</i>
		<i>Trap, Wakken, Mullen, Krag, &c.</i> }	2. Amorphous. <i>a.</i> Fine grained. <i>b.</i> Coarse grained. <i>c.</i> Cellular.	Argill 32. Silex 47. Oxyde of Iron 20. <i>Withering.</i>
		14. Calp.	1. Amorphous. <i>a.</i> Slaty.	Argill, Silex, and Iron, with 50 per cwt. Carbon. of Lime. <i>Kirw.</i>
		15. Argillaceous Shiftus. <i>Argillite. Killas. Grapholite.</i>	1. Amorphous and flaty. <i>a.</i> Bluish. <i>b.</i> Bluish grey. <i>c.</i> Purplish. <i>d.</i> Black, &c. &c.	Argill 25. Silex 60. Magnesia 9. Iron 6. and some Petroleum. <i>Kirw.</i>
		16. Novaculite. <i>Turkey Stone.</i>	1. Amorphous. <i>a.</i> Slaty.	
	6. Silex.	1. Diamond?	1. Crystallised. <i>a.</i> In octohedrons and their varieties. <i>b.</i> In dodecahedrons and their varieties. <i>c.</i> Indeterminate.	
		2. Sapphire.	1. Crystallised. <i>a.</i> In lengthened hexhedral prisms, joined base to base. <i>b.</i> Indeterminate.	Silix 35. Argill 58. Carbon. of Lime 5. Iron 2. <i>Berg.</i>

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
1. Homogeneous.	6. Silex.	3. Topaz of Brazil.	1. Crystallified. a. In tetrahedral rhomboidal prisms, terminated by tetrahedral pyramids. b. Indeterminate.	
		4. Topaz of Saxony.	1. Crystallified. a. In tetrahedral rhomboidal prisms, with dihedral summits. b. Indeterminate.	Silex 52. Argill 44. Lime 2. Iron 0,03. <i>Wiegleb.</i>
		5. Beryl of Siberia.	1. Crystallified. a. As the foregoing.	
		6. Ruby.	1. Crystallified. a. In octohedrons and their varieties. b. Indeterminate.	Silex 16. Argill 76. Lime 1. Iron 3. <i>Klapr.</i>
		7. Emerald.	1. Crystallified. a. In truncated hexhedral prisms, and their modifications.	Silex 24. Argill 60. Lime 8. Iron 6. <i>Berg.</i>
		8. Aqua Marine.	1. Crystallified. a. As the foregoing. Surface striated.	Silex 64. Argill 24. Lime 8. Iron 1,5. <i>Bindheim.</i>
		9. Cryfolite.	1. Crystallified. a. In hexhedral prisms with corresponding pyramids.	Silex 15. Argill 64. Lime 17. Iron 1. <i>Achard.</i>
		10. Hyacinth.	1. Crystallified. a. In dodecahedrons with unequal rhombic faces.	Silex 25. Argill 40. Carbon. of Lime 20. Iron 13. <i>Berg.</i>
		11. Hyacinth of Vesuvius.	1. Crystallified. a. In tetrahedral prisms truncated at their angles, terminated by tetrahedral pyramids truncated at their summits.	
		12. Olivin.	1. Amorphous. a. Compact. aa. In large masses. bb. In grains.	Silex 54. Argill 40. Iron 4. <i>Gmelin.</i>
		13. Garnet.	1. Crystallified. a. In dodecahedrons, with rhombic faces and their varieties. b. With 24 trapezoidal faces. c. Indeterminate. 2. Amorphous. a. Compact. b. Foliated. c. Slaty.	Silex 48. Argill 30. Lime 11. Iron 1. <i>Achard.</i>
		14. White Garnet. <i>Vesuvian.</i>	1. Crystallified. a. With 24 trapezoidal faces.	Silex 55. Argill 39. Lime 6. <i>Berg.</i>

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
1. Homogeneous.	6. Silix.	15. Tourmalin.	1. Crystallized. a. In striated prisms, with 3, 6, or 9 sides, and trihedral summits. b. Indeterminate.	Silex 37. Argill 39. Lime 15. Iron 9. <i>Berg.</i>
		16. Schorl.	1. Crystallized. a. Similar to the foregoing, but opaque. b. Indeterminate. 2. Amorphous. a. Compact.	Silex 52. Argill 37. Lime 5. Magnesia 3. Iron 3. <i>Chaptal.</i>
		17. Thumerstein. <i>Violet Schorl.</i>	1. Crystallized. a. In compressed rhomboidal parallelepipeds, striated. b. Indeterminate. 2. Amorphous.	Silex 52. Argill 25. Lime 9 Iron 9. and some Manganese. <i>Klapr.</i>
		18. Schorlite.	1. Crystallized. a. Indeterminate.	Silex 50. Argill 50. <i>Klapr.</i>
		19. Rubellite.	1. Crystallized. a. In diverging striated prisms, with trihedral summits.	Silex 57. Argill 35. Oxyde of Iron and Manganese 5. <i>Bindheim.</i>
		20. Amethyst.	1. Crystallized. a. In hexahedral prisms, with corresponding pyramids. b. Indeterminate. 2. Amorphous.	Silex 30. Argill 60. Lime 8, 22. Iron 1,66? <i>Achard.</i>
		21. Quartz.	1. Crystallized. a. In double hexahedral pyramids, with or without an intermediate prism. b. Indeterminate. 2. Of particular shapes. a. In cubes. b. Lenticular. c. Stalactitic. d. Cellular, &c. 3. Amorphous. a. Lamellar. b. Fibrous. c. Granular. d. Compact.	Silex 93. Argill 6. Lime 1. <i>Bergm.</i>
		22. Pras.	1. Crystallized. a. Like the foregoing. b. In needle-like crystals. c. Indeterminate. 2. Amorphous.	
		23. Elastic Quartz.	1. Amorphous. a. Granular.	Silex 0,965. Argill 0,025. Iron 0,01. <i>Klapr.</i>
		24. Obsidian.	1. Amorphous. a. Compact.	Silex 69. Argill 22. Iron 0,09. <i>Bergm.</i>
		25. Calcedony. <i>Cornelian, Agate, &c.</i>	1. Of particular shapes. a. Stalactitic. b. Filiform. c. Tubular. d. Cellular, &c.	Silex 84. Argill 16. <i>Bergm.</i>

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
1. Homogeneous.	6. Silex.		2. Amorphous. a. Compact.	
		26. Chrysoprase.	1. Amorphous. a. Compact.	Silex 0,96. Oxyde of Nickel 0,01. Lime 0,0083. Argill 0,0083. Oxyde of Iron 0,0083. <i>Klapr.</i>
		27. Hyalite.	1. Amorphous. a. Lamellar. b. Compact.	Silex 57. Argill 18. Lime 15. and a very little Iron. <i>Link.</i>
		28. Opal. <i>Semi-opal.</i>	1. Amorphous. a. Effulgent. b. Dull.	Silex 98,75. Argill 0,01. Oxyde of Iron 0,01. <i>Klapr.</i>
		29. Pitchstone.	1. Crystallified. a. In hexhedral prisms, with trihedral pyramids.	
			2. Amorphous. a. Compact.	Silex 73. Argill 18. Iron 00,58. <i>Weigl.</i>
		<i>Ligniform Opal.</i>	b. Slaty. c. Fibrous.	Silex 0,855. Argill 0,01. Iron 0,005. Lime and Magnesia 0,005. Water, inflammable Matter, and Air 0,11. <i>Klapr.</i>
		30. Cats Eye.	1. Amorphous. a. Compact.	
		31. Flint.	1. Crystallified. a. In double trihedral pyramids.	
			2. Amorphous. a. In nodules. b. Intersperfed.	Silex 80. Argill 18. Lime 2. <i>Weigl.</i>
		32. Hornstone.	1. Crystallified. a. In hexhedral prisms, with or without pyramids. b. In double trihedral pyramids. c. In cubes.	
			2. Amorphous. a. Compact.	Silex 72. Argill 22. Carbon. of Lime 6. <i>Kirw.</i>
		<i>Siliceous Schistus.</i> <i>Basnite.</i>	b. Slaty.	Silex 75. Lime 10. Magnesia 0,046. Iron 3. Coal 5. <i>Weigl.</i>
		<i>Hornslate.</i>	- - - - -	Silex 73. Argill 24. Iron 3. <i>Weigl.</i>
		33. Jasper.	1. Crystallified. a. In irregular hexhedral prisms.	

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
1. Homogeneous.	6. Silex.		2. Amorphous. a. In large masses. b. In nodules.	Silex 54. Argill 30. Iron 16. <i>Delameth.</i>
		<i>Egyptian Pebble.</i>		
		34. Porcelanite.	1. Amorphous. a. Compact.	
		35. Heliotropium.	1. Amorphous. a. Compact.	
		36. Woodstone.		
		37. Felspar.	1. Crystallised. a. In tetrahedral prisms truncated obliquely, and their varieties. aa. Transparent.	Silex 62. Argill 17. Lime 6,5. Barofelenite 2. Magnesia 6. Iron 1,4. <i>Wcstrumb.</i>
		<i>Adularia.</i>		
		<i>Common Felspar.</i>	bb. Opaque.	Silex, Argill, with Lime and Magnesia, or Baryte. <i>Kirw.</i>
			2. Amorphous. a. Foliated.	
		38. Labrador Felspar.	1. Amorphous. a. Foliated.	Silex 69. Argill 13. Sulphate of Lime 12. Oxyde of Cop- per 0,7. Oxyde of Iron 0,04. <i>Bindheim.</i>
		39. Petrilite.	1. Amorphous. a. With cubic fragments.	
		40. Argentine Felspar.	1. Crystallised. a. As common felspar. 2. Amorphous. a. Foliated.	Silex 46. Argill 36. Oxyde of Iron 16. <i>Dodun.</i>
		41. Felsite.	1. Amorphous. a. Compact.	
		42. Staurolite.	1. Crystallised. a. In tetrahedral prisms, with tetrahedral pyramids, either single, or crossing each other at right angles.	Silex 44. Argill 20. Baryte 20. Water 16. <i>Wcstrumb.</i>
		43. Lapis Lazuli.	1. Amorphous. a. Compact.	Silex, Lime, Sulphate of Lime, and Iron. <i>Margraff.</i>
		44. Prehnite.	1. Crystallised. a. In compressed tetrahedral prisms. b. Indeterminate. 2. Amorphous. a. Foliated.	Silex 44. Argill 30. Lime 18. Iron 5. Water and Air 2. <i>Klapr.</i>
		45. Ædelite.	1. Of particular shapes. a. Tuberos.	Silex 62 to 69. Argill 18 to 20. Lime 8 to 16. Water 3 to 4. <i>Berg.</i>

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
1. Homogeneous.	6. Silex.	46. Zeolyte.	1. Crytallified. <i>a.</i> In cubes, and their varieties. <i>b.</i> In truncated hexhedral prisms. <i>c.</i> In hexagonal lamellæ. <i>d.</i> Indeterminate. 2. Amorphous. <i>a.</i> Fibrous. <i>b.</i> Striated. <i>c.</i> Compact. <i>d.</i> Loose.	Silex 50. Argill 20. Lime 8. Water 22. <i>Pelletier.</i>
		47. Siliceous Spar.	1. Crytallified. <i>a.</i> In tetrahedral prisms. <i>b.</i> In hexhedral prisms.	Silex 61,1. Lime 21,7. Argill 6,6. Magnesia 5. Oxyde of Iron 1,3. Water 3,3. <i>Bind.</i>
		48. Rose Spar. <i>Red Stone of Rarvenstein.</i>	1. Crytallified. <i>a.</i> Indeterminate. 2. Amorphous. <i>a.</i> Thick foliated.	
	7. Adamantine Earth.	1. Adamantine Spar.	1. Crytallified. <i>a.</i> In oblique hexhedral truncated prisms. 2. Amorphous.	Adamantine Earth 68. Silex 31,5. Iron and Nickel 00,05. <i>Klapr.</i>
	8. Jargon Earth.	1. Jargon.	1. Crytallified. <i>a.</i> In short tetrahedral prisms, with tetrahedral pyramids. <i>b.</i> Indeterminate.	Jargon Earth 68. Silex 31. Iron and Nickel 5. <i>Klapr.</i>
	9. Sidneian Earth.	1. Sidneia.	1. Amorphous. <i>a.</i> Loose.	<i>Wedgwood.</i>
2. Mixed.	1. Calcareous.	1. Marl. <i>Argillo-Calcites.</i>	1. Semi-indurated. 2. Indurated. 3. Slaty.	Carbon. of Lime 60 to 80. Remainder Argill and Silex. <i>Kirw.</i> Penetrated by Bitumen, Sulphur, or Pyrites. <i>Kirw.</i>
		2. Limestone with Argillite. 3. Siliceous Limestone. 4. Ferruginous Limestone. 5. Gypsum with calcareous Spar. 6. Gypsum with Swineftone. 7. Gypsum with Marl.		
	2. Magnesian.	1. Calciferous Asbestinite.		
		2. Steatite with Argill.		
		3. Serpentine with Hornblende.		
		4. Siliciferous Potstone.		
		5. Ferruginous Steatite.		

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
2. Mixed.	3. Argillaceous.	1. Calci ferous Argillite. 2. Talcofe Argillite. 3. Siliciferous Argillite. 4. Ferruginous Argillite. 5. Hornblende with Garnet. 6. Hornblende Slate with Talc or Mica. 7. Hornblende Slate with Quartz. 8. Trap with Hornblende. 9. Trap with Mullen. 10. Trap with Krag. 11. Siliciferous Trap. 12. Ferruginous Clays. 13. Mullen with Asbestinite.		
	<i>Colorific Earths.</i> 4. Siliceous.	1. Earthy Quartz. 2. Ferruginous Quartz. 3. Earthy Quartz with Actinolite. 4. Earthy Hornstone. 5. Ferruginous Hornstone. 6. Siliceous Schist with Limestone. 7. Siliceous Schist with Argillite. 8. Siliceous Schist with Mullen. 9. Pitchstone with Opal.		
3. Aggregated.	1. Calcareous.	1. Calcareous Sandstone. 2. Calcareous Breccia.	1. Crystallized. a. In rhomboids. 2. Amorphous. - - - - -	Carbonate of Lime 37,5. Siliceous 62,5. <i>Lassone.</i> Fragments of Marble in a calcareous Cement.
	2. Magnesian.	1. Potstone Porphyry. 2. Serpentine Porphyry.	1. Amorphous. a. Undulatingly foliated. 1. Amorphous. a. Compact.	Potstone and Felspar. Serpentine and Felspar.

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
3. Aggregated.	3. Argillaceous.	1. Argillaceous Sandstone.	1. Amorphous. <i>a.</i> Slaty. <i>b.</i> Compact.	Argillaceous Cement, with fragments of Quartz, Felspar, and Flint.
		2. Rubble Stone.	1. Amorphous. <i>a.</i> Slaty. <i>b.</i> Compact.	Argillaceous Cement, with Quartz, Siliceous Schistus or Hornstone, and Argillite.
		3. Argillaceous Porphyry.	1. Amorphous.	Felspar contained in indurated Clay, Hornblende, Trap, Wakken, Mullen, Krag, or Argillite.
		4. Amygdaloid.	1. Amorphous.	Rounded masses of Calced. Agate, Zeol. Cal. Spar, Lithomarga, Steatite, Green Earth, &c. in an argillaceous Basis.
		5. Schistose Mica.	1. Amorphous. <i>a.</i> Slaty.	Mica and Quartz.
	4. Siliceous.	1. Granite.	1. Amorphous. <i>a.</i> Compact. <i>b.</i> Slaty.	Quartz, Felspar, and Mica.
		2. Sienite.	1. Amorphous. <i>a.</i> Compact. <i>b.</i> Slaty.	Quartz, Felspar, & Hornblende.
		3. Granatine.	1. Amorphous.	Quartz, Felspar, Schorl; Quartz, Felspar, Garnet; &c. &c. &c. <i>Saunders.</i>
		4. Granitell.	1. Amorphous.	Quartz, Felspar; Quartz, Schorl; Quartz, Mica; &c. <i>Kirw.</i>
		5. Granalite.	1. Amorphous.	Quartz, Felspar, Mica, Schorl; Quartz, Felspar, Mica, Steatite; &c.
		6. Gneifs.	1. Amorphous. <i>a.</i> Slaty. <i>b.</i> Fibrous.	Quartz, Felspar, and Mica. <i>Werner.</i>
		7. Siliceous Porphyry.	1. Amorphous. <i>a.</i> Compact. <i>b.</i> Slaty.	Crystals of Felspar in a basis of Jasper, Hornstone, Pitchstone, Obsidian, Siliceous Schistus, Schistose Hornstone, or Felspar.
		8. Pudding-stone.	1. Amorphous.	Rounded Pebbles in a Siliceous Cement.
		9. Siliceous Sandstone.	1. Amorphous.	
		10. Siliceous Breccia.	1. Amorphous.	Angular fragments of Siliceous Stones in a Siliceous Cement.

CLASS III.
M E T A L S.

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
1. Ductile.	1. Platina.	1. Native Platina.	1. In grains.	Platina united to Iron.
	2. Gold.	1. Native Gold.	1. Crystallized. a. In aluminiform octohedrons and their varieties. b. In tetrahedral prisms, with tetrahedral pyramids. c. In cubes. d. Indeterminate. 2. Of particular shapes. a. Dendritic. b. Ramose. c. Filiform. d. Capillary, &c. 3. Amorphous. a. In lumps. b. In grains. c. Interpersed.	Gold alloyed with Silver, Copper, or Iron.
		<i>Auriferous Pyrites.</i>		
		2. Grey Ore.	1. Crystallized. a. In tetrahedrons. b. In hexagonal lamellæ. c. Indeterminate. 2. Of particular shapes. a. Dendritic.	Gold combined with Sulphur, Antimony, Arsenic, Lead, Iron, and Silver. <i>Born.</i>
		3. White Ore.	1. Of particular shapes. a. Dendritic. 2. Amorphous.	Gold 18. Silver 0.06. with Bismuth and Sulphur. <i>Gerhard.</i>
	3. Quicksilver.	1. Native Quicksilver.	1. Fluid. 2. Interpersed.	
		2. Native Amalgam.	1. Crystallized. a. In truncated octohedrons. b. Indeterminate.	Quicksilver alloyed with Silver.
		3. Native Oxide.	1. Amorphous. a. Granular.	Quicksilver 91. Oxygen 9. <i>Born.</i>
		4. Horn Quicksilver.	1. Crystallized. a. In tetrahedral rhomboidal prisms, with tetrahedral pyramids. b. Indeterminate.	Quicksilver 70. with Muriatic and Sulphuric Acids. <i>Woulfe.</i>
		5. Cinnabar.	1. Crystallized. a. In double tetrahedral pyramids, truncated at their summits, and with or without intermediate prisms. b. Indeterminate. 2. Amorphous. a. Scaly. b. Fibrous. c. Granular.	Quicksilver 80. Sulphur 20. <i>Kirw.</i>

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
1. Ductile.	3. Quicksilver.		<i>d.</i> Compact. <i>e.</i> Earthy. <i>f.</i> Pulverulent.	
		6. Hepatic Ore.	1. Amorphous. <i>a.</i> Foliated.	Quicksilver with Sulphuret of Potash or Soda. <i>Born.</i>
	4. Silver.	1. Native Silver.	1. Crystallised. <i>a.</i> In cubes. <i>b.</i> In octohedrons. <i>c.</i> Indeterminate.	Silver united to a small quantity of Gold. <i>Berg.</i>
			2. Of particular shapes. <i>a.</i> Dendritic. <i>b.</i> Ramose. <i>c.</i> Filiform. <i>d.</i> Capillary, &c.	
			3. Amorphous. <i>a.</i> In laminæ. <i>b.</i> Superficial. <i>c.</i> In masses.	
		2. Arsenical Silver.	1. Crystallised. <i>a.</i> In truncated hexedral prisms longitudinally striated. <i>b.</i> Indeterminate.	Silver 90. Arsenic and Iron 10. <i>Kirw.</i>
			2. Amorphous. <i>a.</i> Foliated. <i>b.</i> Granular. <i>c.</i> Compact.	
		3. Horn Silver.	1. Crystallised. <i>a.</i> In cubes, or rectangular parallelepipeds. <i>b.</i> Indeterminate.	Silver 67,5. Muriatic Acid 21. Sulphuric Acid 0,005. Iron 0,06. Argill 0,015. Lime 0,005. <i>Klapr.</i>
			2. Amorphous. <i>a.</i> In masses. <i>b.</i> Interfered.	
		<i>Butter-Milk Ore.</i>		Silver 24. Muriatic Acid 8. Argill 67. with some Copper. <i>Klapr.</i>
		4. Vitreous Silver.	1. Crystallised. <i>a.</i> In cubes and their modifications. <i>b.</i> In octohedrons. <i>c.</i> Indeterminate.	Silver 75. Sulphur 25. <i>Berg.</i>
			2. Of particular shapes. <i>a.</i> Dendritic. <i>b.</i> Ramose. <i>c.</i> Filiform, &c.	
		5. Brittle Vitreous Ore. <i>Black Ore.</i>	3. Amorphous. <i>a.</i> In laminæ. <i>b.</i> Superficial. <i>c.</i> In masses.	Silver 66. Iron 5. Antimony 10. Sulphur 12. with a little Copper and Arsenic. <i>Klapr.</i>
			1. Amorphous. <i>a.</i> Granular. <i>b.</i> Spongy. <i>c.</i> Pulverulent.	

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
1. Ductile.	4. Silver.	6. Red Silver Ore.	1. Cryftallifed. a. In dodecahedrons, with rhombic faces and their modifications. b. In hexhedral prifms, having trihedral pyramids, with rhombic faces and their varieties. c. In double hexhedral pyramids. d. Indeterminate. 2. Amorphous. a. Compact.	Silver 60. Arfenic 27. Sulphur 13. <i>Berg.</i> Silver 60. Antimony 20. Sulphur 11. Sulph. Acid 8. <i>Klapr.</i>
		7. White Silver Ore. <i>Weiffgultig Ertz.</i>	1. Amorphous. a. Granular. b. Compact.	Silver 20. Lead 40. Sulphur 12. Antimony 8. Iron 2,5. Argill 7. Silex 0,5. <i>Klapr.</i>
	5. Lead.	1. Native Lead.	1. Of particular shapes. a. Dendritic.	
		2. Native Oxyde of Lead.	1. Cryftallifed. a. In tetrahedral rhomboidal prifms, with trihedral or dihedra fummits. b. Indeterminate. 2. Amorphous. a. Compact. b. Pulverulent.	Lead 36. Oxygen 37. Iron 24. Argill 2. <i>Macquart.</i>
		3. Carbonate of Lead. <i>Spathofe Lead Ore.</i>	1. Cryftallifed. a. In hexhedral prifms, with hexhedral pyramids, and their modifications. b. Indeterminate.	Lead 80. Carbonic Acid 16. with fome Lime and Argill. <i>Weftumb.</i>
		4. Molybdate of Lead.	1. Cryftallized. a. In rectangular tables and their modifications. b. Indeterminate.	<i>Klapr.</i>
		5. Phofphate of Lead.	1. Cryftallifed. a. In hexhedral prifms, with or without hexhedral pyramids and their modifications. b. Indeterminate.	Acid 18. Lead 73. with a little Iron. <i>Klapr.</i>
		6. Sulphate of Lead.	1. Cryftallifed. a. In octohedrons and their modifications. b. Indeterminate.	<i>Withering.</i>
		7. Sulphuret of Lead. <i>Galena.</i>	1. Cryftallifed. a. In cubes and their modifications. b. In octohedrons and their modifications. c. Indeterminate.	Lead 77. Sulphur 20. Silver 1. <i>Kirw.</i>

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
1. Ductile.	6. Copper.	7. Muriate of Copper.	1. Amorphous. a. In a sandy form.	Copper 52. Acid 10. Oxygen 11. Water 12. Sand 11. <i>Roche foucauld.</i>
		8. Sulphuret of Copper. <i>Vitreous Copper Ore.</i>	1. Crystallised. a. In hexhed. truncated prisms. 2. Amorphous. a. Compact.	Copper 56. with Sulphur. <i>Klapr.</i>
		9. Variegated Copper Ore.	1. Amorphous. a. Compact.	Copper and Sulphur, with some Iron. <i>Berg.</i>
		10. Yellow Copper Ore.	1. Crystallised. a. In equilateral tetrahedrons and their modifications. b. In dodecahedrons with triangular faces. c. Indeterminate. 2. Amorphous. a. Compact.	Copper 20. with Iron and Sulphur. <i>Kirw.</i>
		11. Grey Copper Ore.	1. Crystallised. a. In tetrahedrons and their modifications. b. In dodecahedrons, with triangular faces and their modifications. c. Indeterminate. 2. Amorphous. a. Compact.	Copper 16. Lead 34. Antimony 16. Iron 13. Sulphur 10. Silica 2. Silver 2. <i>Klapr.</i>
		12. White Copper Ore.	- - - - -	Copper 40. with Arsenic and Iron. <i>Henkel.</i>
	7. Iron.	1. Native Iron.	1. Of particular shapes. a. Ramose. 2. Amorphous. a. Compact.	
		2. Grey Iron Ore. <i>Magnetical Iron Ores.</i>	1. Crystallised. a. In aluminiform octohedrons and their modifications. b. In cubes, partly striated, and their modifications. c. In double hexhedral pyramids, deeply truncated at their summits. d. In hexagonal laminae. e. Indeterminate. 2. Amorphous. a. Foliated. b. Granular. c. In loose grains. d. Interspersed. e. Compact.	Iron united to a small proportion of Oxygen. <i>Delameth.</i>
		<i>Emery.</i>		
		3. Hematite.	1. Of particular shapes. a. Stalactitic. b. Mamillated. c. Reniform. d. Botryoidal. e. Filiform, &c. 2. Amorphous. a. Fibrous. b. Scaly. c. Compact. d. Earthy.	Iron 45. with Carbonic Acid and Argill. <i>Kirw.</i>
		<i>Ochres.</i>		

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
1. Ductile.	7. Iron.	4. Argillaceous Iron Ore.	1. Of particular shapes. a. Reniform. b. Globular. c. Tubuliform, &c. 2. Amorphous. a. With distinct columnar concretions. b. Compact.	Iron united to Oxygen, Carbonic Acid, and Argill, and often Phosphate of Iron. <i>Delameth.</i> Iron 38. Lime 38. Carbonic Acid and Manganese 24. <i>Berg.</i>
		<i>Basaltic Iron Ore.</i>		
		5. Spathose Iron Ore.	1. Crystallised. a. In rhomboidal parallelepipeds. b. Indeterminate. 2. Amorphous. a. Foliated.	
		6. Sulphate of Iron.	1. Crystallised. a. In rhombs. 2. Of particular shapes. a. Capillary. 3. Amorphous. a. Compact.	
		7. Sulphuret of Iron. <i>Pyrites.</i>	1. Crystallised. a. In tetrahedrons and their modifications. b. In cubes, smooth or striated, and their modifications. c. In octohedrons and their modifications. d. Indeterminate. 2. Of particular shapes. a. Stalactitic. b. Capillary. c. Globular. d. Cellular, &c. 3. Amorphous. a. Striated. b. Compact.	
		8. Tin.		
		1. Native Oxide. <i>Spathose Tin Ore.</i>	1. Crystallised. a. In obtuse tetrahedral pyramids, with or without intermediate prisms, and their modifications. b. In dodecahedrons, with rhombic faces, and their modifications. c. Indeterminate. 2. Amorphous. a. Fibrous. b. Compact.	
		<i>Wood Tin.</i>		
		2. Sulphuret of Tin. <i>Tin Pyrites.</i>	1. Amorphous. a. Fibrous. b. Compact.	Tin 80. with Oxygen and Iron. <i>Kirw.</i> Tin 63. with Oxygen and Iron. <i>Klapr.</i> Tin 56. Sulphur 40. Copper 4. <i>Berg.</i> Tin 36. Sulphur 26. Copper 38. Iron 1. <i>Klapr.</i>
2. Fragile.	9. Bismuth.	1. Native Bismuth.	1. Crystallised. a. In equilateral triangular laminæ. b. Indeterminate.	

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
2. Fragile.	1. Bismuth.		2. Of particular shapes. <i>a.</i> Dendritic. <i>b.</i> Penniform.	
			3. Amorphous. <i>a.</i> Foliated.	
		2. Native Oxide of Bismuth.	1. Amorphous. <i>a.</i> Compact. <i>b.</i> Friable. <i>c.</i> Loose.	
		3. Sulphuret of Bismuth.	1. Amorphous. <i>a.</i> Striated. <i>b.</i> Foliated.	Bismuth 60. Sulphur 40. <i>Sage.</i>
	2. Nickel.	1. Native Nickel.	1. Crystallized. <i>a.</i> In rhomboidal tables. 2. Amorphous. <i>a.</i> Foliated.	Nickel alloyed by Iron. <i>Born.</i>
		2. Native Oxide of Nickel.	1. Amorphous. <i>a.</i> Earthy. <i>b.</i> Pulverulent.	
		3. Kupfer Nickel.	1. Of particular shapes. <i>a.</i> Dendritic. 2. Amorphous. <i>a.</i> Granular. <i>b.</i> Compact.	Nickel united to Iron, Arsenic, Cobalt, and Sulphur. <i>Berg.</i>
	3. Arsenic.	1. Native Arsenic. <i>Scherben Cobalt.</i>	1. Of particular shapes. <i>a.</i> Stalactitic. <i>b.</i> Botryoidal. <i>c.</i> Mamillated. 2. Amorphous. <i>a.</i> In conchoidal laminae. <i>b.</i> Compact. <i>c.</i> Pulverulent.	Arsenic alloyed by Iron.
		2. Native Oxide of Arsenic.	1. Crystallized. <i>a.</i> In truncated tetrahedral prisms. <i>b.</i> Indeterminate. 2. Amorphous. <i>a.</i> Pulverulent.	<i>Born.</i>
		3. Sulphuret of Arsenic. <i>Realgar and Orpiment.</i>	1. Crystallized. <i>a.</i> In tetrahedral rhomboidal prisms, with corresponding pyramids and their modifications. <i>b.</i> Indeterminate. 2. Of particular shapes. <i>a.</i> Stalactitic. 3. Amorphous. <i>a.</i> Foliated. <i>b.</i> Compact. <i>c.</i> Pulverulent.	Arsenic from 84—90. Sulphur from 16—10. <i>Kirw.</i>
		4. Mispickel.	1. Crystallized. <i>a.</i> In rhomboidal tetrahedral prisms, with obtuse dihedral summits. <i>b.</i> Indeterminate.	Arsenic with Sulphur and Iron, and sometimes Silver. <i>Born.</i>

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
2. Fragile.	3. Arfenic.	4. Mispickel.	2. Amorphous. a. Granular.	Cobalt alloyed by Arfenic.
		1. Grey Cobalt Ore.	1. Crystallised. a. In smooth cubes and their modifications. b. Indeterminate.	
			2. Of particular shapes. a. Dendritic. b. Stalactitic.	
			3. Amorphous. a. Granular. b. Compact.	
	4. Cobalt.	2. Native Oxide of Cobalt.	1. Amorphous. a. Earthy. aa. Blue. bb. Black. cc. Brown.	Berg.
		3. Arseniate of Cobalt. <i>Cobalt Bloom.</i>	1. Crystallised. a. In tetrahedral prisms, terminated by dihedral pyramids having rhombic faces. b. Indeterminate.	
		4. Sulphuret of Cobalt.	2. Amorphous. a. Compact. b. Efflorescent.	
			1. Crystallised. a. In smooth cubes and their modifications. b. Indeterminate.	
			2. Amorphous. a. Compact.	
	5. Zinc.	5. White Cobalt Ore.	1. Crystallised. a. In striated cubes, and their modifications. b. Indeterminate.	Cobalt united to Arfenic, Iron, and Sulphur.
		1. Native Oxide of Zinc. <i>Calamine.</i>	2. Amorphous. a. Granular. b. Compact.	
			1. Of particular shapes. a. Supplanting calcareous spars, fluors, &c. b. Stalactitic.	
			2. Amorphous. a. Compact. b. Spongy. c. Friable.	
		2. Carbonate of Zinc.	1. Crystallised. a. In compressed hexhedral prisms, with dihedral fummits. b. Indeterminate.	Zinc 60. Carbonic Acid 28. Water 6. Silix 5. Iron 1. Berg.
		3. Sulphate of Zinc.	2. Of particular shapes. a. Mamillated.	
			1. Crystallised. a. In rhomboidal prisms, with tetrahedral pyramids. b. Indeterminate.	
				Carbonate of Zinc 36. Silix 50. Water 12. Pelletier.
				Zinc 20. Sulphuric Acid 40. Water 40. Berg.
				Oxide of Zinc 84. Oxide of Iron 3. Silix 12. Argil 1. Berg.

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
2. Fragile.	5. Zinc.	3. Sulphate of Zinc.	2. Of particular shapes. <i>a.</i> Stalactitic.	Zinc 52. Sulphur 26. Iron 8. Copper 4. Silica 6. Water 4. <i>Berg.</i>
		4. Blende.	1. Crystallized. <i>a.</i> In tetrahedrons and their modifications. <i>b.</i> In octohedrons and their modifications. <i>c.</i> Indeterminate. 2. Amorphous. <i>a.</i> Foliated.	
	6. Antimony.	1. Native Antimony.	1. Amorphous. <i>a.</i> Striated.	Antimony alloyed by 16 per cent. of Arsenic. <i>Sage.</i> <i>Mongez.</i> <i>Delcath.</i> Antimony with Arsenic, Acid and Sulphur. <i>Born.</i> Antimony 74. Sulphur 26. <i>Berg.</i> Antimony with Iron, Arsenic, Sulphur, and sometimes Silver. <i>Berg.</i> <i>Peyrouse.</i>
		2. Native Arsenical Antimony.	1. Amorphous. <i>a.</i> Foliated.	
		3. Native Oxide of Antimony.	1. Crystallized. <i>a.</i> In stellated needle-like crystals.	
		4. Muriate of Antimony.	1. Crystallized. <i>a.</i> In rectangular tetrahedral laminae.	
		5. Red Antimonial Ore.	1. Crystallized. <i>a.</i> In slender prismatic needles.	
		6. Sulphuret of Antimony. <i>Grey Ore.</i>	1. Crystallized. <i>a.</i> In compressed hexahedral prisms, with obtuse tetrahedral pyramids. <i>b.</i> Indeterminate. 2. Amorphous. <i>a.</i> Fibrous. <i>b.</i> Striated. <i>c.</i> Foliated. <i>d.</i> Granular. <i>e.</i> Compact.	
		7. Plumose Antimonial Ore.	1. Crystallized. <i>a.</i> In slender prismatic needles. <i>b.</i> Indeterminate.	
	7. Manganese.	1. Native Manganese.	1. Of particular shapes. <i>a.</i> Globular.	
		2. Native Oxide of Manganese.	1. Crystallized. <i>a.</i> In tetrahedral rhomboidal prisms, truncated. <i>b.</i> Indeterminate. 2. Of particular shapes. <i>a.</i> Stalactitic. <i>b.</i> Mamillated. 3. Amorphous. <i>a.</i> Striated. <i>b.</i> Granular. <i>c.</i> Compact. <i>d.</i> Earthy.	
		<i>Black Wad.</i>		Oxide of Manganese 43. Oxide of Iron 43. Lead 4½ Mica 5. <i>Wedgwood.</i>

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
2. Fragile.	7. Manganefe.	3. Siliceous Ore of Manganefe.	1. Crytallified. a. In rhomboidal parallelepipeds. b. Indeterminate. 2. Of particular shapes. a. Stalactitic. b. Mamillated. 3. Amorphous. a. Striated. b. Compact. c. Earthy.	Oxyde of Manganefe 35. Silex 55. Iron 5. Argill 5. <i>Ruprecht.</i>
	8. Scheele.	1. Tunstate of Lime. <i>Tungsten.</i>	1. Crytallified. a. In aluminiform octohedrons and their varieties. b. Indeterminate. 2. Amorphous. a. Compact.	Tunstenic Acid 44. Lime 56. <i>Scheele.</i>
		2. Wolfram.	1. Crytallified. a. In compressed hexhedral prisms, with tetrahedral pyramids. b. Indeterminate. 2. Amorphous. a. Striated. b. Foliated. c. Compact.	Tunstenic Acid 64. Oxyde of Manganefe 22. Oxyde of Iron 13. Silex and Tin 2. <i>Delhuyar.</i>
	9. Uranite.	1. Carbonate of Uranite. <i>Calcolite.</i>	1. Crytallified. a. In cubes, or their segments. b. Indeterminate. 2. Amorphous. a. Earthy.	Uranium with Carbonic Acid and a little Copper. <i>Klapr.</i>
		2. Sulphuret of Uranite. <i>Pech Blende.</i>	1. Amorphous. a. Compact.	
	10. Molybdena.	1. Molybdena.	1. Amorphous. a. Foliated.	Molybdic Acid 60. Sulphur 40. <i>Klapr.</i>
	11. Menachanite.	1. Native Menachanite.	1. Amorphous. a. In grains.	Menachanite alloyed by Iron. <i>Gregor.</i>

CLASS IV.
INFLAMMABLES.

ORDER.	GENUS.	SPECIES.	VARIETY.	ANALYSIS.
1. Aeriform.	1. Hydrogen.	1. Pure Hydrogen. 2. Sulphurated Hydrogen. <i>Hepatic Gas.</i>		
2. Liquid.	1. Bitumen.	1. Naptha. 2. Petroleum. 3. Barbadoes Tar.		
3. Solid.	1. Bitumen.	1. Asphaltum. 2. Jet. 3. Coal. 4. Mineral Elastic Gum.	1. Compact. 2. Slaty.	
	2. Amber.	1. Honeystone. 2. Common Amber.	1. Crystallified. <i>a.</i> In aluminiform octohedrons. 1. Amorphous. <i>a.</i> Transparent. <i>b.</i> Opaque.	
	3. Mineral Tallow.			
	4. Sulphur.	1. Common Sulphur. 2. Volcanic Sulphur.	1. Crystallified. <i>a.</i> In rhomboidal octohedrons and their varieties. <i>b.</i> Indeterminate. 2. Amorphous. <i>a.</i> Compact. 1. Amorphous. <i>a.</i> Granular. <i>b.</i> Compact.	
	5. Plumbago.	1. Common Plumbago. <i>Graphite.</i> 2. Anthracolith.	1. Amorphous. <i>a.</i> Compact. <i>b.</i> Slaty. - - - - -	Carbon 90. Argill 5. Iron 3. Silex 2. <i>Born.</i>

APPENDIX.

VOLCANIC PRODUCTIONS.		
I. Cinders.	II. Lava.	III. Vitreous Lavas.
1. Loose. a. Afhes. b. Sand.	1. Cellular.	1. Glafs.
2. Coherent. a. Puzzolana. b. Trafs. c. Tufa. d. Pumice. e. Piperino.	2. Compact.	2. Enamel.
		3. Scoriæ.
		4. Slaggs.

FINIS.

ERRATA.

- Page 7. *After* Species 16, *add* Species 17 Sulphate of Argill; Capillary (*Hair-Salt*), Amorphous (*Mountain Butter*) and in Solution.
8. In the Analysis of the Garnet, *instead of* Iron 1, *read* Iron 10.
12. *Under* Siliceous Spar 47, *insert* Tremolite.
- *After* Adamantine Spar, in place of the Analysis given, *read* Adamantine Earth 33. Argill 66. *Klapr.*
23. In the Analysis of Red Antim. Ore, Species 5, *dele* the comma after *Arsenic.*

